

Sharing Snacks

Reporting Category Number and Number Sense

Topic Identifying halves and fourths as fractional parts—shares or portions—of a whole

Materials

- Snacks to share that represent the area/region model (e.g., a graham cracker, a circle-shaped cookie, a square-shaped brownie)
- Snacks to share that represent the set model (e.g., fruit snacks, jelly beans)

Vocabulary

fair share, part, whole, equal, fraction, half, halve, halves, fourth, fourths

Student/Teacher Actions (what students and teachers should be doing to facilitate learning)

1. Present a simple sharing task to the class as follows: Two children want to share one graham cracker (or snack of your choice) with each other. Each child should get a “fair share.” How much should each child get?
2. Engage students in a discussion about how they could divide up the cracker so each child gets a “fair share.” Demonstrate some scenarios that are *not* fair (e.g., give one student a quarter and another student three-quarters). Ask students to explain why this sharing is or is not fair.
3. Once students have decided how to divide up the cracker and have explained why this is fair, ask if anyone can explain how much of the cracker each student has. Be sure to ask whether either student has a whole cracker. Talk about each piece as *half of the whole* cracker. Explain to students that a *fraction* is a part of a whole—in this case, a part of a whole cracker.
4. Present other sharing situations that involve halves and fourths, using different concrete objects to share. Be sure to include examples of sets of objects (e.g., a group of six fruit snacks to share between two students, a set of four crayons to share among four students, a group of eight pencils to share among four students).

Assessment

- **Questions**
 - Using an example of the region/area model and the set model for fractions, demonstrate an unfair sharing situation among four students. “Does each student have a fourth? How do you know?”
 - What does it mean to be “fair” when working with fractions?
- **Journal/Writing Prompts**
 - Demonstrate for students what a *half* looks like (e.g., half a cookie, half of a set of buttons). “Draw what you think the whole looks like.”

- “You and a friend are sharing a pizza. Draw or show how you will share your pizza. How much will each person get?”
- “Draw or tell about how you use the number $\frac{1}{2}$.”
- **Other**
 - Have students fold different sizes of paper to show halves and fourths.
 - Let students find halves, using Cuisenaire rods—i.e., ask them to find a half for the *green* rod, the *blue* rod, etc.

Extensions and Connections (for all students)

- Extend sharing problems to involve more than one whole. For example, three students sharing two cookies.
- Give students opportunities to work with many different wholes and sharing situations. Always identify the whole, or show students a fraction and ask them to describe what the whole would be.
- Incorporate fractions into everyday classroom tasks. For example, choose a group of students to represent halves or fourths based on clothing items. During graphing, use fraction vocabulary when possible to describe data. For example, “Half of the class has pets. Our whole class is made up of 24 children.” During snack time, discuss whether sharing is or is not “fair”—whether students get equal amounts.